

KNIFE GATE VALVE DUCTILE IRON BODY

TECHNICAL PASSPORT

KNIFE GATE VALVE WITH GEARBOX RISING STEM DUCTILE IRON BODY - WAFER TYPE PN10

VG 4400-08

APPLICATION

The knife gate valve is particularly suitable for the most difficult applications.

Area of use: water treatment networks, pulp and paper industry, chemical plants, winemaking, cement works, pneumatic transport, storage.

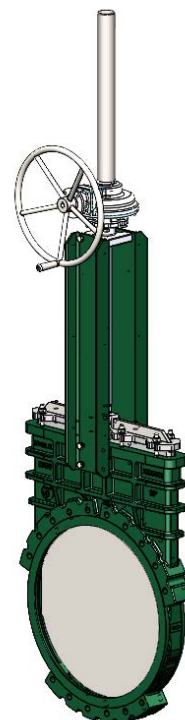


Fluids: water, sewage, pulp, pasty products, powdery, granular, fibrous, abrasive and crystallizing.

GENERAL CHARACTERISTICS

Range: from DN700 to DN1200.

- Knife Gate Valve on/off or regulation with rising stem.
- Molded monobloc body
- Unidirectional water tightness: Flow direction indicated on the body with an arrow.
- Installation between flanges ISO PN10.
- Small retention zone.
- Gate with a beveled cutting edge guided in the body with little backlash.
- Guaranteed closure, without risk of blockage.
- Standard polished gate, soft contact with the gaskets.
- Very resistant ductile iron packing flange avoids risks of breaks.
- Operating force reduced thanks to the elasticity of the gaskets.
- Full flow when fully opened, ensuring a high flow rate with low head loss.
- Flow regulation possible for pasty or abrasive fluids with installation of a deflector.



STANDARDS

| | |
|---------------------|---|
| Design | Manufacture according to the requirements of the European directive n° 2014/68/UE «Equipment under pressure» : modulate H. In option: product conform to European directive ATEX «ATmosphère EXplosive» n° 2014/34/UE. |
| Face to face | Face to face dimension according to TECOFI standard |
| Connection | Mounting between flanges in accordance with EN1092-2 and DIN 2501 : ISO PN10 |
| Tests | Pressure test according to standards EN12266-1, DIN 3230 and ISO 5208. Body : 3 bar Seat : 2.2 bar |

PRODUCT APPROVALS



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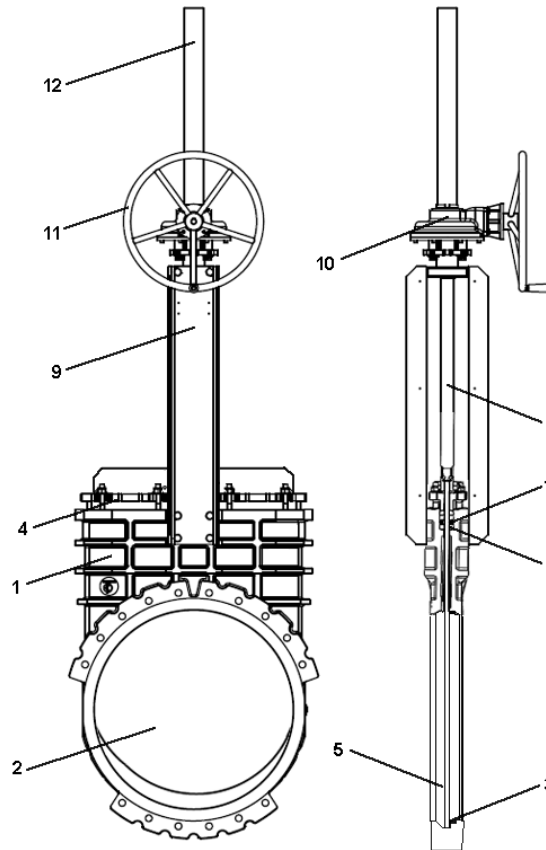
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CONSTRUCTION

The valves are coated with epoxy paint to protect them against corrosion

| Component | Coating |
|----------------------|--------------------------------------|
| Body (1) | Epoxy powder RAL 6005 150 microns |
| Support plate (9) | Liquid epoxy RAL 6005 70 microns |
| Gland packing (4) | |
| Handwheel (11) | Liquid epoxy RAL 9005 70 microns |
| Protection tube (12) | |
| Gearbox (10) | |



| Pos. | Q-ty | Description | Material | Equivalences | | |
|------|------|------------------|------------------------------|--------------|------------------|----------------|
| | | | | DIN | ASTM | BS |
| 1 | 1 | Body | Ductile iron EN-GJS-500-7 | GGG 50 | A536 65-70-50-05 | 1563 EN-JS1050 |
| 2 | 1 | Gate | Stainless steel X5CrNi 18-10 | X5CrNi 18 10 | A 182 AISI 304 | 1449-2 304 S15 |
| 3 | 1 | Seat gasket (1) | NBR | | | NBR |
| 4 | 1 | Packing gland | Ductile iron EN-GJS-400-15 | GGG 40 | A536 65-45-12 | 1563 EN-JS1030 |
| 5 | 1 | Support ring (1) | Stainless steel X5CrNi 18-10 | X5CrNi 18 10 | A 182 AISI 304 | 1449-2 304 S15 |
| 6 | 2 | Packing | PTFE | | | |
| 7 | 1 | O-Ring | NBR | | | NBR |
| 8 | 1 | Stem | Stainless steel 13% Cr | X12CR13 | AISI 410 | |
| 9 | 2 | Support plate | Steel | | | |
| 10 | 1 | Gearbox | | | | |
| 11 | 1 | Handwheel | Cast iron | | | |
| 12 | 1 | Protection tube | Steel | | | |

(1) - Parts missing on metal/metal sealing valve

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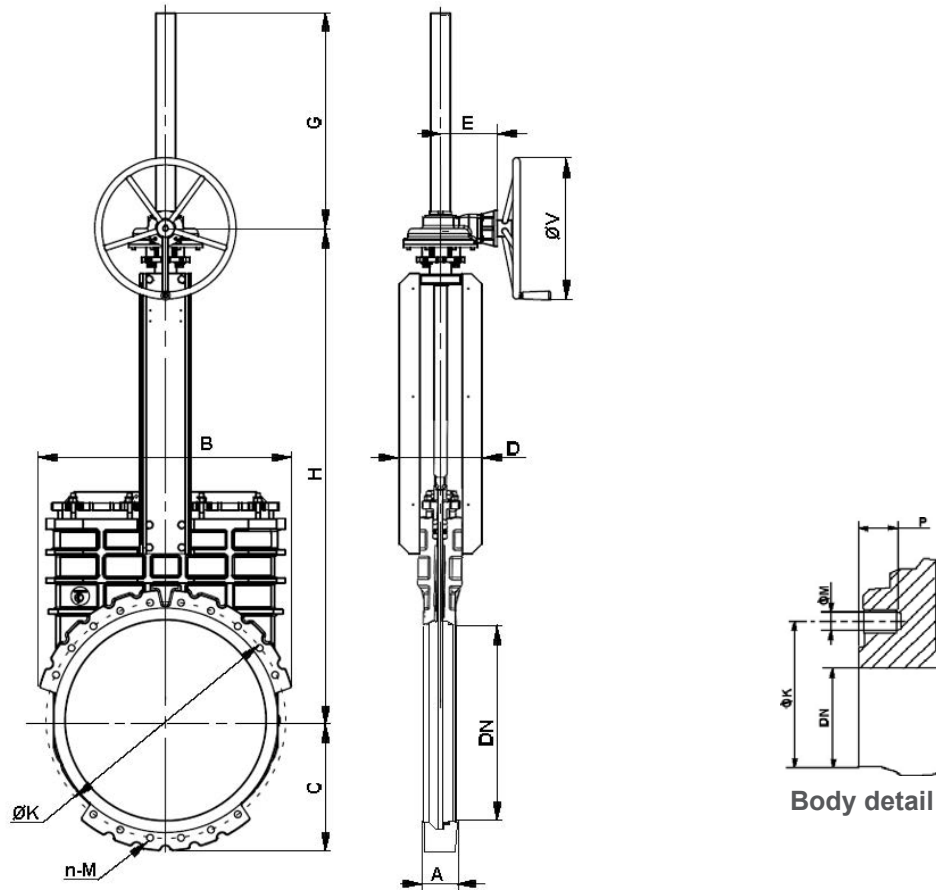
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DIMENSIONS



| DN | | A | B | C | D | E | G | H | ØK | P | n-M | Number of through holes | Ø V | Weight (kg) |
|------|------|-----|------|-----|-----|-----|------|------|------|----|--------|-------------------------|-----|-------------|
| mm | inch | | | | | | | | | | | | | |
| 700 | 28" | 110 | 892 | 462 | 300 | 200 | 780 | 1742 | 840 | 29 | 16xM27 | 16 | 200 | 410 |
| 800 | 32" | 110 | 1013 | 530 | 300 | 200 | 880 | 1958 | 950 | 29 | 16xM30 | 16 | 200 | 560 |
| 900 | 36" | 110 | 1127 | 583 | 355 | 200 | 1025 | 2210 | 1050 | 40 | 20xM30 | 20 | 200 | 780 |
| 1000 | 40" | 110 | 1252 | 645 | 355 | 200 | 1115 | 2402 | 1160 | 40 | 20xM33 | 20 | 325 | 985 |
| 1200 | 48" | 130 | 1485 | 755 | 396 | 200 | 1335 | 2819 | 1380 | 40 | 24xM36 | 24 | 325 | 1635 |

Dimension A - face to face according to TECOFI standard

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WORKING CONDITIONS

Maximum working pressure: 2 bar

Maximum working temperature : -10°C / +80°C (NBR joint in standard)

⚠ The above mentioned pressures are only valid if the direction of assembly indicated by the arrow on the valves is observed.

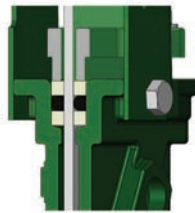
Upstream/downstream tightness



Elastomer tightness

Metal/metal tightness

Packing tightness



PTFE/Elastomer

Tightness in option

| Tightness | maximum temperature |
|---------------------|-----------------------|
| Metal/metal | Tmax : -10°C / +80°C |
| White NBR | Tmax : -10°C / +80°C |
| EPDM | Tmax : -10°C / +130°C |
| Silicone | Tmax : -10°C / +170°C |
| FPM (Type Viton®) | Tmax : -10°C / +170°C |
| PTFE | Tmax : +4°C / +170°C |
| CSM (Type Hypalon®) | Tmax : +4°C / +80°C |

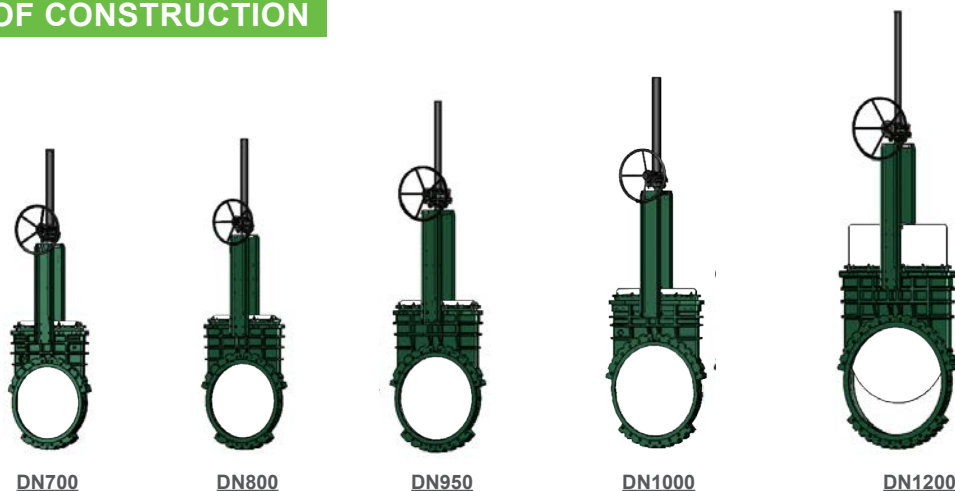
⚠ To ensure a satisfactory tightness, when using the PTFE gasket, the operating pressure must be at least 1 bar.

FLOW RATES

Kv of valves (m³/h)

| DN | | Operating stroke, % | | | | | | | | | |
|-----|------|---------------------|--------|--------|--------|--------|---------|---------|---------|---------|---------|
| mm | inch | 10% | 20% | 30% | 40% | 50% | 60% | 70% | 80% | 90% | 100% |
| 350 | 14" | 218,4 | 725,8 | 1323 | 2173,2 | 3294,8 | 4914,3 | 7120,9 | 11415,3 | 19105,4 | 24890,7 |
| 400 | 16" | 389,1 | 1150,1 | 2024,4 | 3130,9 | 4669,6 | 7009,1 | 10355,2 | 16014,2 | 22600,5 | 26497,7 |
| 450 | 18" | 402,7 | 1287,3 | 2402,9 | 3803,4 | 5686,8 | 8247,3 | 12248,7 | 17298,5 | 26403,9 | 29485 |
| 500 | 20" | 617 | 1611,1 | 2935,9 | 4625,8 | 7054,7 | 10438,9 | 15446 | 23582,8 | 35107,4 | 42784 |

TYPES OF CONSTRUCTION



DN700

DN800

DN950

DN1000

DN1200

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